APPENDIX B

STATEMENT OF WORK

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1.0 General Scope of Work and Deliverables

The **required digital mapping products** to be obtained through this RFP are as follows:

1.1 Project Area #1: Urban Area – Net Square Miles = 2,898 (for precise map extent see TECHNICAL EXHIBIT C1)

1. Four-inch pixel resolution ortho imagery coverage of the urban project area at a 1" = 100' map scale.
2. Imagery to be delivered as GeoTIFF files corresponding to each ortho tile in the supplied tile grid.
3. Stereo image models (stereo pairs) with a minimum 70% overlap and a 30% sidelap captured at the time of the exposure.
4. Generate sufficient Digital Terrain Datasets from LiDAR (DSM, DTM and DEM*) to support contour generation.
5. 2-foot elevation contours.
6. Federal Geographic Data Committee (FGDC) compliant metadata.

1.2 Project Area #2: Angeles National Forest and Los Padres National Forest –Net Square Miles = 1,056 (for precise map extent see TECHNICAL EXHIBIT C2)

1. One-foot pixel resolution ortho imagery coverage of National Forest areas at a 1" = 200' map scale.
2. Imagery to be delivered as GeoTIFF files corresponding to each ortho tile in the supplied tile grid.

1.3 Project Area #3 (Optional): Santa Catalina Island-Net Square Miles = 75 (for precise map extent see TECHNICAL EXHIBIT C3)

1. Four-inch pixel resolution ortho imagery coverage of the Santa Catalina Island project area at a 1" = 100' map scale.
2. Imagery to be delivered as GeoTIFF files corresponding to each ortho tile in the supplied tile grid.
3. Stereo image models (stereo pairs) with a minimum 70% overlap and a 30% sidelap captured at the time of the exposure.
4. Generate sufficient Digital Terrain Datasets and land use classifications as specified in FEMA guidelines from LiDAR to support contour generation.
5. 2-foot elevation contours.
6. FGDC compliant metadata.

1.4 Project Area #2 (Optional): Angeles National Forest and Los Padres National Forest-Net Square Miles = 1,056 (for precise map extent see TECHNICAL EXHIBIT C2)

1. Digital terrain datasets from IFSAR to support 5 foot contour compilation.
2. 5- foot elevation contours.
3. FGDC compliant metadata.

* DSM – Digital Surface Model; DTM – Digital Terrain Model; DEM – Digital Elevation Model.

1.5 Processes and Procedures

The proposal shall describe the production processes used for each of the imagery deliverables. Included in this section should be a discussion or listing of available production equipment including both hardware and software. The proposal shall provide a detailed description of digital aerial acquisition, photogrammetric compilation, and measurement procedures.

2.0 Project Requirements, Specifications and Certifications

2.1 Data Requirements

Remote-sensed digital data will be collected to provide source data for creation of orthophotography, stereo models and digital terrain datasets. Proposals should clearly delineate number of sensors, flight methodology, control methodology, production process, quality assurance/quality control, and proposed acceptance test methodology for providing the source data and derived imagery products.

2.2 Aerial Imagery Requirements

Due to the County's desire to have a very high resolution digital aerial orthophoto, LA County is requiring that all aerial imagery shall be collected using Large Camera Systems (such as the DMC or its equivalent). Direct digital imagery shall be collected to support a minimum 4" Ground Sample Distance (GSD) for urban areas and 1' GSD for national forest areas. Flight heights shall be 3,000' Above Mean Terrain (AMT) for 4" pixel collection and 9,000' AMT for 1' pixel collection. Stereo pairs must be a deliverable and exhibit a 70% overlap at the time of exposure. The digital camera system must be supported by a forward motion compensation device. For the urban project area, where tall structures more than 4 stories tall are present, forward overlap will be 80% and sidelap will be 30% to allow mitigation of building lean.

2.3 Equipment Requirements

The proposal shall clearly identify the equipment (aircraft, digital sensor, etc.) to be used to collect imagery. The minimum equipment requirement for this project is as follows:

- 2 Z/I DMC direct digital aerial sensors (or equivalent),
- The Proposer should have the ability to deploy 2 Lieca ALS50 LiDAR systems or ALS40 systems (or equivalent) upgraded to ALS50 standards to develop Digital Terrain Datasets.

Proposer must meet these minimum requirements, otherwise the proposal will not be considered.

2.4 Control Establishment

Proposer will be responsible for creating, updating and/or augmenting the county's control points as needed (approximately 300 to 500) to meet the accuracy requirements of this RFP. All control used in the production of products for this effort shall conform to acceptable errors as set forth by the FGDC. If additional control points are generated as a result of this effort, the Contractor will be required to provide these points as an attributed feature layer for incorporation into the deliverables. All proposals shall contain a detailed explanation of control methodology. Proposals shall also contain a listing of control data that will be provided as deliverables under this effort (survey/AT reports, POS EO data, or other control data unique to the control method used).

Proposer shall provide a detailed description of the process by which the accuracy standards will be met. This should include a description of how the existing control network might be used, additional control that might be required, source for control survey crews, etc. If fully analytical aero triangulation procedures are used then Proposer should describe the process to include hardware and software. If direct georeferencing is proposed, the Proposer should fully describe the process and equipment used to eliminate conventional aero triangulation, and the corrective procedures to be employed in the event of equipment failure.

2.5 Direct Digital Aerial Imagery Acquisition

Proposer shall describe the overall methodology for direct digital aerial imagery collection to include flight scheduling/planning, flight plan, procedures for ensuring image quality, photo scale/GSD, etc.

2.6 Collection Conditions

All imagery shall be collected to conform to the American Society for Photogrammetry and Remotes Sensing (ASPRS) Draft Aerial Photography Standard (1995). www.asprs.org/asprs/resources/standards/photography.htm.

These standards include optimal climatic and atmospheric conditions, front and side overlap specifications, flight line specifications, and individual exposure specifications including tip, tilt, and crab standards. Imagery should not be obtained when the ground is obscured by haze, snow, dust, floodwaters, or environmental factors that may misrepresent ground features. All efforts should be taken to minimize the exposure to smoke plumes from fires. If any major fires are occurring during the flight mission, the aerial mission should be discontinued. Clouds and/or shadows of clouds shall not appear in the image. Additionally, there should not be any distortions in the photography caused by solar altitude during the time of the flight; therefore, the mission should be flown during desirable weather conditions and generally between the hours of 10:00 AM and 2:00 PM PST.

2.6.1 Re-flights

If required, the Proposer will correct unacceptable digital aerial imagery at no additional cost to LA County. All re-flight coverage shall overlap the accepted photography by at least two stereo models.

2.6.2 Pilot (Test) Area

Proposer will provide LA County with sample imagery displaying the tonal balancing and color enhancements that will provide the best imagery to LA County. LA County will have an opportunity to review the samples, and will give written acceptance of the enhancements prior to the Proposer processing the remainder of the project.

2.7 LiDAR Specifications

If the Proposer selects the use of the Leica ALS50 LiDAR system to acquire data for use in creating the required DTM, the proposal shall contain detailed information regarding the collection and control methodology, collection sensor, process and software used for post processing, QA/QC procedures, and acceptance test procedures.

Specifically, the LiDAR flight plans should contain parameters of flight height for the Federal Emergency Management Agency (FEMA). Specifications of LiDAR (2-foot and 5-foot contours) should be between 6,500 and 7,500ft. AMT. Although the flight heights should be the same for the collection missions, the Proposer should include the differences in processing and planning (wider field of view, lower pulse rate, etc.) that will be used to process the 2 and 5 foot contour datasets.

The Proposer's proposal should follow guidelines and standards set forth in FEMA Guidelines and Specifications for Flood Mapping Partners, Appendix A, http://www.fema.gov/pdf/fhm/frm_gsaa.pdf.

Detailed methodology must be proposed for each of the following:

2.7.1 Equipment

The Proposer shall clearly identify the equipment (aircraft, ALS50 sensor, etc.) to be used to collect LiDAR data.

2.7.2 Collection

Specifications and methodology for the LiDAR flight should include documentation of mission date(s), time, flight altitude, overlap, and airspeed. Flight plans shall be generated and should cover the proposed project areas. Proposal should address how various environmental conditions will be handled and any special considerations for areas of dense coverage (e.g., locations containing dense foliage).

A complete survey control plan shall be submitted to include collection, processing and incorporation of survey control in the LiDAR processing. The plan should include a detailed description of survey control for quality control and validation checks of the LiDAR dataset. Specifications for the data collection should include scan angle, along-track, and cross-track, pulse spacing, pulse width and density, and number of returns. LiDAR derived data will have the accuracy required to produce topographic maps including 2-foot elevation contours. Proposed data products shall be prepared to meet the accuracy requirements of ASPRS Guidelines for Vertical Accuracy Reporting for LiDAR Data, Version 1, May 2004.

Proposer should describe the production process used for vegetation or structure (e.g., buildings) removal in order to determine bare-earth representation. Proposer should describe the approach to definition and resolution of data voids and data artifacts resulting from the mission. Proposer should describe quality assurance and quality control (QA/QC) procedures to ensure the integrity of the LiDAR data. Proposer should describe acceptance test procedures to be used to ensure data conforms to the accuracy requirements.

2.7.3 LiDAR Digital Terrain Datasets Specifications

After LiDAR acquisition and post processing 95% of all well-defined points will be within 30 centimeters or approximately (0.98') and 65% of all points to be within fifteen centimeters (15cm) or approximately one-half foot (0.5') or 15cm Root Mean Square (RMS) as defined by the National Standard for Spatial Data Accuracy (NSSDA) when compared to "hard point" control vertically. The final results may be better than the above stated accuracy.

Approximately 1 point per square meter is to be used for the development of the final DTM. The actual number of raw points is about 3 to 4 times higher.

The following deliverable products are desired:

1. Pre-flight mission planning data in the form of a digital image depicting the flight line map and control plan.
2. Mission report describing system calibration and validation of data collection procedures in ASCII file format.
3. LiDAR data to include classified reflective return data in .LAS or other agreed upon open format.
4. Metadata.

2.7.4 Digital Terrain Datasets (includes DSM, DTM and DEM) and Contour Data Requirements

LA County desires to obtain Digital Terrain Datasets that include:

- A Digital Surface Model (DSM) dataset containing the LiDAR mass points and breaklines used to generate subsequent elevation products.
- A Digital Terrain Model (DTM) representing the bare-earth terrain including all appropriate breaklines.
- Topographic contours at a minimum of 2 ft. and 5 ft. for **Project Area #1** and **Project Area #2** respectively.
- A Digital Elevation Model (DEM) dataset representing the bare-earth in grid format.

Proposer should describe the methodology for creating the Digital Terrain Datasets using stereo edited LiDAR data. To generate accurate contours at a 2 foot interval the LiDAR DTM points will be enhanced with photogrammetrically compiled breaklines. Breaklines are defined as ridgelines, retaining walls, edges of pavements or hydrographic features. The LiDAR data points together with the breaklines will form a TIN (Triangular Irregular Network) from which the contours are generated.

Regardless of the source data and development method(s) used, the data shall meet the accuracy requirements of ASPRS Guidelines for Vertical Accuracy Reporting for LiDAR Data, Version 1, May 2004. Proposals should provide a detailed description of the input data, production process, quality assurance/quality control, and proposed acceptance test methodology for providing the digital terrain data required by this effort.

2.8 Metadata

FGDC-compliant metadata will be provided for the deliverable orthophotography data sets. These metadata will be completed using standard industry metadata tools and output in standard file formats for viewing in all widely available viewing utilities.

3.0 Detailed Project Specifications

3.1 Accuracy Standards

All digital imagery should conform to the industry accuracy and quality standards established by the Federal Geographic Data Committee (FGDC) and the American Society of Photogrammetry and Remote Sensing (ASPRS):

Standard FGDC-STD-007.3-1998, Geospatial Positioning Accuracy Standard Part 3:National Standard for Spatial Data Accuracy.
http://www.fgdc.gov/standards/documents/standards/accuracy/chapter3.pdf

Orthographic imagery produced under this effort shall conform to, FGDC-STD-008-1999 *Content Standard for Digital Orthoimagery*, http://www.fgdc.gov/standards/status/sub3_6.html.

All imagery shall be collected to conform to the American Society for Photogrammetry and Remote Sensing (ASPRS) Draft Aerial Photography Standard (1995). www.asprs.org/asprs/resources/standards/photography.htm.

Accuracy of 4" ortho digital images shall conform with requirements of Class I as specified by ASPR accuracy standards.

Accuracy of 1' ortho digital images shall conform with requirements of Class 2 as specified by ASPR accuracy standards.

3.2 Detailed Description of Tasks and Deliverables

3.2.1 Task # 1 - Geodetic Control and Pre-marking

A. The Proposer shall be responsible for:

Proposer shall be responsible for any ground control, which the Proposer deems necessary to perform the photogrammetric mapping. Any survey control generated for this project will be provided as a deliverable to LA County and must comply at a minimum with the following conditions:

Proposer should utilize the surveying methodology that provides the most cost effective method of generating any control required to support the photogrammetric mapping.

a. The survey shall utilize existing durable cadastral monuments, which can be referenced on a recorded document (tract map, parcels maps or record of survey) as control monuments wherever possible. Where no cadastral monument exists the Proposer will set a durable monument.

b. Horizontal accuracy shall be consistent with Second Order, Class I, i.e. ninety-five percent (95%) confidence interval of 2 cm base error and 20 parts per million linear errors.

c. Vertical accuracy shall be third order.

d. Survey shall be constrained to National Geodetic Survey (NGS) First Order control monuments, Epoch date 1995.0

e. All GPS surveys will follow procedures spelled out in NOAA Technical Memorandum NOS NGS-58 (Guidelines for establishing GPS-derived ellipsoid heights, 2 cm accuracy)

f. A monument record form shall be prepared for each point providing a description of the monument as well as its location.

g. Vertical datum shall be NAVD88. All vertical stations set will be tied directly to NGS monuments who's orthometric height was determined by differential leveling and adjusted by the NGS on, or after June 1995.

h. Units shall be U.S. Survey Feet.

i. All coordinates will conform to the California Coordinate System of 1983, Zone5. Longitude and latitude will be based on the North American Datum of 1983.

B. The County shall be responsible for:

a. Assignment of all point numbers.

b. Provision of blank monument record forms.

c. Providing the County Survey Monuments digital files.

C. Deliverables:

a. *ArcGIS shapefiles with cadastral monuments as points (with geodetic data as attributes).*

b. *GPS observation data in RINEX format.*

c. *Record Forms for cadastral monuments.*

d. *ASCII comma-delimited file, Point Number, Northing, Easting, orthometric height, description*

e. *ASCII comma-delimited file, Point Number, longitude, latitude , ellipsoid height, orthometric height, , description*

3.2.2 Task #2 - Aerial Triangulation

A. The Proposer will be responsible for:

Aerial triangulation shall be performed to support planimetric topographic mapping for deliverables required under this contract as well as for the extraction of terrain data to support 2 foot contouring. Aerial triangulation shall comply with the following requirements:

a. The aerial triangulation shall be performed using a bundle adjustment.

b. The RMS of control and tie points in the final block adjustment shall be in the order of 10 microns.

c. The RMS derived by comparison of survey check points not used in the block adjustment with aerial triangulation results shall not exceed 12 microns at digital photo scale

B. Deliverables:

a. *Block adjustment printout showing all statistical data pertaining to the adjustment.*

b. *ASCII files containing coordinate values of aerial triangulation points.*

c. *PATB output containing model settings.*

3.2.3 Task #3 - Digital Terrain Datasets (DSM, DTM and DEM)

A. The Proposer will be responsible for:

Digital Terrain Datasets shall be produced for **Project Area #1** to support generation of ortho imagery, 3D visualization, change detection and 2 foot contour generation with breakline data. Digital Terrain Datasets should be produced using LiDAR technology with a combination of stereo compilation for above specified breaklines.

The Digital Terrain Datasets shall comply with the following requirements:

a. The DTM spacing shall be 5 foot or less.

b. The DTM shall comply with National Standard for Spatial Data Accuracy (NSSDA) specification for 2 foot contouring, i.e., accuracy (z) of 1.19 foot at the ninety-five percent (95%) confidence level.

c. The horizontal component of the DTM shall comply with National Standard for Spatial Data Accuracy (NSSDA) specification for 1:1200 mapping, i.e., accuracy (r) of 3.80 foot at the ninety-five percent (95%) confidence level.

B. Deliverables:

a. *Project documentation outlining procedures and data collected, and reports of accuracy evaluation.*

b. *First return data in ArcGIS raster format and Microstation compatible format.*

c. *Bare-earth DTM incorporating the last return LiDAR data in ArcGIS raster format and Microstation compatible format.*

d. *FGDC compliant metadata.*

3.2.4 Task #4 - Contours with 2 Foot Interval

A. The Proposer will be responsible for:

Generating contours with 2 foot intervals for **Project Area #1** using DTM prepared in Task #3. Contour lines should be seamless for the entire area as specified in Section 3, General Scope of Work and Deliverables.

B. Deliverables:

a. ArcGIS shapefiles with contours tiled to specific grid system (as proposed by the Proposer and approved by LA County).

b. AutoCAD drawing file with contours tiled to specific grid system (as proposed by the Proposer and approved by LA County).

3.2.5 Task #5 - Ortho Imagery with Four Inch Pixel Resolution

A. The Proposer will be responsible for:

Ortho imagery shall be generated for **Project Area #1** using deliverables in Task #1, Task #2 and Task #3 with the following requirements:

a. Ortho imagery shall be true color.

b. Ortho imagery shall be color balanced and seamlessly mosaicked.

c. Ortho rectification process shall incorporate bridge elevation data.

d. Ortho imagery will be tiled to specific grid system (as proposed by the Proposer and approved by LA County).

e. Ortho imagery files will be processed in NAD83, CA State Plane Coordinate System, Zone 5, US Survey Feet.

B. Deliverables:

a. *The ortho imagery shall be delivered in Geo-TIFF file format (or other alternative format, such as JPEG 2000) upon approval by LA County.*

b. *FGDC compliant metadata.*

3.2.6 Task #6 - Ortho Imagery with One Foot Pixel Resolution

A. The Proposer will be responsible for:

Ortho imagery shall be generated for the **Project Area #2** using deliverables in Task #1, Task #2 and Task #3 with the following requirements:

a. Ortho imagery shall be true color.

b. Ortho imagery shall be color balanced and seamlessly mosaicked.

c. Ortho rectification process shall incorporate bridge elevation data.

d. Ortho imagery will be tiled to specific grid system (as proposed by the the Proposer and approved by County).

e. Ortho imagery files will be processed in NAD83, CA State Plane Coordinate System, Zone 5, US Survey Feet.

B. Deliverables:

a. *The ortho imagery shall be delivered in Geo-TIFF file format (or other alternative format, such as JPEG 2000) upon approval by County.*

b. *FGDC compliant metadata.*

3.2.7 Task #7 (Optional) – Near Infrared Imagery with Four Inch Pixel Resolution

A. The Proposer will be responsible for:

Near infrared imagery shall be generated for **Project Area #1** using deliverables in Task #1, Task #2 and Task #3 with the following requirements:

a. Near infrared imagery shall be color balanced and seamlessly mosaicked.

b. Near infrared imagery will be tiled to specific grid system (as proposed by the Proposer and approved by LA County).

e. Near infrared imagery files will be processed in NAD83, CA State Plane Coordinate System, Zone 5, US Survey Feet.

B. Deliverables:

a. *The near infrared imagery shall be delivered in Geo-TIFF file format (or other alternative format, such as JPEG 2000) upon approval by LA County.*

b. *FGDC compliant metadata.*

3.2.8 Task #8 (Optional) - Ortho Imagery with Four Inch Pixel Resolution

A. The Proposer will be responsible for:

Ortho imagery shall be generated for **Project Area #3** using **optional deliverables** for **Project Area #3** in Task #1, Task #2 and Task #3 with the following requirements:

a. Ortho imagery shall be true color.

b. Ortho imagery shall be color balanced and seamlessly mosaicked.

c. Ortho rectification process shall incorporate bridge elevation data.
d. Ortho imagery will be tiled to specific grid system (as proposed by the Proposer and approved by LA County).
e. Ortho imagery files will be processed in NAD83, CA State Plane Coordinate System, Zone 5.

B. Deliverables:

a. *The ortho imagery shall be delivered in Geo-TIFF file format (or other alternative format, such as JPEG 2000) upon approval by LA County.*
b. *FGDC compliant metadata.*

3.2.9 Task #9 (Optional) - Digital Terrain Datasets (DSM, DTM and DEM)

A. The Proposer will be responsible for:

Digital Terrain Datasets shall be produced for **Project Area #2** to support generation of ortho imagery, 3D visualization, change detection and 5 foot contour generation. DTM can be produced by using automatic stereo compilation (from ortho imagery) or can be produced by using LiDAR or IFSAR.

The Digital Terrain Datasets shall comply with the following requirements:

a. The Digital Terrain Datasets spacing shall be 5 meters or less.
b. The Digital Terrain Datasets shall comply with the NSSDA specification for 5 foot contouring, i.e., accuracy (z) of 1.19 feet at the ninety-five percent (95%) confidence level.
c. The horizontal component of the DTM shall comply with NSSDA specification for 1:2400 mapping, i.e., accuracy (r) of 3.80 foot at the ninety-five percent (95%) confidence level.

B. Deliverables:

a. *Project documentation outlining procedures and data collected, and reports of accuracy evaluation.*
b. *First return data in ArcGIS raster format and Microstation compatible format.*
c. *Bare-earth DTM incorporating the last return LiDAR or IFSAR data in ArcGIS raster format.*
d. *FGDC compliant metadata.*

3.2.10 Task #10 (Optional) - Contours with 5 Foot Interval

A. The Proposer will be responsible for:

Generating contours with 5 foot interval for **Project Area #2** using DTM prepared in Task #9. Contour lines should be seamless for the entire extent of **Project Area #2** as specified in Section 3, General Scope of Work and Deliverables.

B. Deliverables:

a ArcGIS shapefiles with contours tiled to specific grid system (as proposed by the Proposer and approved by LA County).
b. AutoCAD drawing file with contours tiled to specific grid system (as proposed by the Proposer and approved by LA County).

4.0 Implementation Plan

4.1 Schedule

The Proposer shall provide a detailed contract implementation plan including proposing procedural and operational steps, technical approach and milestones of how the Contractor intends to provide all the specified tasks. The Proposer should specify in the implementation plan how they will address the following issues:

- Very diverse terrain conditions in LA County
- Winter weather conditions (December to March)
- Airspace restrictions over Los Angeles International Airport (LAX) and other regional airports
- Restrictions from military facilities.

LA County would like to see the following timeframes for the project:

Planning stage: September 2005 to November 2005
Acquisition stage: December 2005 to March 2006
Processing stage: January 2006 to May 2006 (incrementally)
Delivery stage: April 2006 to June 2006 (incrementally)

The Proposer should determine under which weather conditions the implementation plan could be executed. Weather conditions should be specified for LAX and for Palmdale Airport. The Proposer will be required to participate in periodic program status reviews. The Proposer will also be required to provide a weekly written status report outlining project status. The Proposer will provide a detailed activity schedule in MS Project that includes the following as a minimum:

1. Proposed collection data schedule
2. Deliverable production tasks
3. Proposed delivery dates for each deliverable
4. Acceptance test data review

This schedule will be updated monthly to represent progress in reaching assigned goals.

4.2 Staffing Profile

Proposer shall provide a company/corporation organization chart and staffing profile including years of tenure for staff. Resumes shall be provided for key personnel including but not limited to project managers and account representatives who will be assigned and dedicated to the County's project. The Proposer shall provide the names of the assigned project manager(s) and account representative(s) who will be dedicated to the County's project and shall not change the individuals without the prior approval of the County. The Proposer shall provide project manager(s) and account representative(s) who have a minimum of five (5) years prior experience in accounts of similar type, size, and scope. The Proposer shall clearly define what responsibilities these individuals will be charged with relative to this Contract.

4.3 Tour of Proposer's Facilities

The Proposer may be required to provide a tour of their facilities and aircraft in order to demonstrate that they have the capability to fully provide the requirements. The Proposer shall provide the tour within five (5) working days of request by the County at the Proposer's site.

4.4 Proposer's Service Operation

The Proposer shall provide a customer service operation plan for the County's Project Manager(s) or designee(s) and other County customers. The customer service operation shall include access to local numbers in the LA County area or a toll free number and provision of an in-house customer service representative who is assigned and dedicated to the County. The in-house customer service representative shall be knowledgeable and responsive relative to contract and customer services issues and available to the County. Customer service is required 8:00 a.m. to 5:00 p.m. PST, Monday through Friday, excluding County holidays. A maximum three (3) hour response time for all customer service calls is required.

4.5 Post Award Contract Kick-Off Meeting

Proposer receiving award(s) under this solicitation may be required to attend a post award contract kick-off meeting to be scheduled by the County's Contract Manager. The Contract Manager will communicate the date, time, location, and agenda for this meeting to the Proposer. The meeting should be held within two weeks from the execution of the contract.

4.6 Contractor's Professional Qualifications

In accordance with California Law, surveying shall be under the responsible charge of a civil engineer authorized to practice surveying or a land surveyor. Photogrammetric mapping shall be under the responsible charge of a civil engineer authorized to practice surveying, a land surveyor or a photogrammetric surveyor with a valid California license.

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4.7 General Quality and Assurance Meetings

Proposer may be required to take part in periodic quality assurance meetings as scheduled by the County's Project Manager(s) or designee(s). The purpose of the quality assurance meetings is to address contract performance issues and problems early on, so that the Contractor delivers as promised, and provides all of the specifications and deliverables. The County, if necessary, may issue cure notices. The County may provide aggressive monitoring of this contract and document performance issues and problems. The Proposer should describe any standard problem logging system which will be offered. For example, a searchable web-based resolution system for tracking of errors, quality issues and technical questions, responses and resolutions over the life of the project.

4.8 History of Cancellation of Projects or Change Orders

Proposer should provide a history of any projects which eventually were cancelled by their customers in the last three (3) years. Also, Proposer should provide information about change orders which were requested for imagery projects processed in the last three (3) years.

4.9 References

Proposer shall provide references as specified below. The County will rely on references to evaluate the proposal. Proposer shall provide a minimum of three (3) references, within the last three (3) years. References shall clearly demonstrate experience relative to geodetic surveying, ortho imagery and topographic mapping where they have performed similar work in size and scope to the County's requirements.

The County reserves the right to take any or all of the following actions:

a. to reject a proposal based on an unsatisfactory reference,
b. to contact any person or persons associated with the referenced site,
c. to request additional references,
d. to contact organizations known to have used or who are currently using the services supplied by the Proposer or the Proposer's Subcontractors,
e. to contact independent consulting firms for additional information about the Proposer or the Proposer's Subcontractors, and
f. to visit any or all of the reference sites for demonstrations.

5.0 Quality Assurance and Quality Control (QA/QC) Process

Proposers are advised that all finished products and final deliverables will be subject to systematic QA/QC, which will be done by an independent photogrametric firm, whose services will be solicited by LA County in conjunction with this contract.

For this purpose, LA County and cooperating cities/agencies will prepare a set of "hidden" control points, which will be used by the above mentioned firm(s). Also, LA County and participating cities will do additional random QA/QC to assure that all received imagery products are in compliance with specified technical specifications and standards. All QA/QC issues should be addressed in Section D of this Request for Proposal (Section 2.10.6 – Proposer's Quality Control Plan).

LA County requests that the Proposer should design their internal monitoring (QA/QC) process using ArcGIS software.

6.0 Licensing

Proposers are advised that all finished products and final deliverables will be perpetually licensed to Los Angeles County upon completion of the work. Nothing is to be construed in any contract that may result from this solicitation that will operate to preclude LA County's full rights to reproduce, reformat, or otherwise disseminate in any fashion or for any purpose, the data or final deliverables as it sees fit. Proposers are advised that any additional licenses to anybody cannot be issued by Proposers without exclusive approval from LA County.

It is Los Angeles County's desire to provide extension of perpetual license for a fee for the high quality imagery products to be delivered to other cities, public or private agencies and firms.

Proposers should have experience in the distribution (and licensing) of obtained imagery and should provide with their proposal a detailed description of the following:

a. Marketing licensing and distribution aerial imagery,
b. Method of data storage and delivery model,
c. Order fulfillment,
d. Shipping and commercial packaging,
e. Online reference tools,
f. Proposed fee structure for these services

7.0 Samples

The Proposer is to submit samples of major imagery products produced by technology and software which are proposed for this project. These samples (for a small coverage area of 3 to 5 sq. miles) must be submitted in digital form (as Geo-TIFF file) and as hard copies in various scales (for example, 1" = 50', 1" = 100' and/or 1" = 200').

8. Data Provided by LA County

Los Angeles County will eventually provide the following data sets in ArcGIS (vector or raster) format to the selected Contractor:

1. Precise county boundary (shapefile format)*[*]
2. Boundary for Project Area #1 (shapefile format)*
3. Boundary for Project Area #2 (shapefile format)*
4. Boundary for Project Area #3 (shapefile format)*
5. Precise city boundaries (for orientation only – shapefile format)*
6. OADI 1 sq. mile sector grid (for orientation only – shapefile format)*
7. Parcel vector database (for orientation only – shapefile format)
8. Existing control cadastral monuments (shapefile format)
9. DEM produced from IFSAR in the year 2001 for national forest areas (ArcGRID raster format)
10. General area specifications for "rural areas" within Project Area #1 (shapefile format)
11. Other relevant GIS layers mutually determined by the Contractor and LA County.

[*] These shapefiles will be provided to all Proposers as a necessary input to the preparation of their response to this RFP.